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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/781,326	02/13/2001	Toyoaki Furusawa	1081.1109/JDH	9068

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EXAMINER

HARRELL, ROBERT B

ART UNIT PAPER NUMBER

2142

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/781,326	Applicant(s) FURUSAWA ET AL.	
	Examiner Robert B. Harrell	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>see attached Office Action</u> . |

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1. Claims 1-14 are presented for examination.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The claims are more directed to A SYSTEM FOR DISTRIBUTING CONTENTS FROM A CHILD SERVER CLOSEST TO A CLIENT AS DETERMINED BY A PARENT SERVER BASED ON CLIENT'S LOCATION.
3. The Drawings and Specification are objected to because figures 19 and 20 are suggested as "Prior Art" on page 2 (lines 8-et seq.) and page 17 (lines 6-9) but such figures are not labeled as "Prior Art". Due to the differences, it is not certain if the figures or the specification is in error and thus are objected to. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for such items as correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, and clarity of meaning, grammatical and idiomatic errors, and the like, in the Specification, Drawings, and claims (i.e., claims should recite "a unit" not "an unit").
4. The following is a quotation of the second paragraph of 35 U.S.C 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5 Claims 1-14 are rejected under 35 U.S.C 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The scope of meaning of the following claim language is not clear:

- a) "the child server" – claim 1 (line 15), claim 8 (line 10)[*note only "child servers" have been introduced in the plural with no singular introduction*];
- b) "the client" – claim 1 (line 17), claim 11 (line 10);
- c) "the being" – claim 5 (line 2) [*suggest deleting "the"];
- d) "the presence" – claim 2 (line 4), 9 (line 10), claim 12 (line 7);
- e) "the contents" – claim 10 (line 6);
- f) "the bases" – claim 13 (line 11).

6. As to 5(a-f) above, these are but a few examples of numerous cases where clear antecedent bases are lacking and not an exhausting recital. Any other term(s) or phrase(s) over looked by examiner and not listed above which start with either "the" or "said" and do not have a single proper antecedent bases also is indefinite for the reasons outlined in this paragraph. Also, these are but a few examples where term(s) or phrase(s) are introduced more than once without adequate use of either "the" or "said" for the subsequent use of the term(s) or phrase(s). Moreover, multiple introduction of a term, or

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changes in tense, results in a lack of clear antecedent bases for term(s) or phrase(s) which relied upon the introduced term. Failure to correct all existing cases where clear antecedent bases are lacking could be viewed as non-responsive.

7. Per claim 2, and other claims with such limitations, examiner is unable to clearly understand if the request itself is ascertained as absent or not, or if such should be the contents. The way the claim(s) is(are) written, it states "ascertain the presence or absence of a distribution request" and then "copies from said parent server the contents that are not held by said child server". Here it would seem the child server acquires and copies from the parent server the contents that are not held by the child server based on the absence of the request. In other words, would the claims be directed to obtaining contents not held by the child in the absence of a request? Clarity is required in this claim and all other claims reciting this or similar limitation(s) (i.e., claims 3-7, 9-10, and 12). Specifically, claims, such as claim 3, also makes no sense in that contents are deleted based on the presence of a request; deleting requested data is illogical. At best reading in light of the specification, with respect to obtaining contents per claims such as claim 2, examiner reads such to be if the requested data is not in the child server a copy is then obtained and stored in the child server based on a presence of a distribution request; and as for claims, such as claim 3, if there are no distribution requests for contents stored in the a child server, then such non-requested contents are then deleted from the child server (i.e., a miss results in loading, Least Recently Used (LRU) results in deletion). Clarification is required.

8. Per claim 14, the temporal condition of "when" cannot be clearly linked with its subject. That is, is the program downloaded "when" the request is made, and not until the request is made, or should a comma be placed after "conducted" (line 4 of claim 14) and "server" (line 5 claim 14)?

9. To the best examiner can understand the claimed language and in the spirit of compact prosecution, the following rejections on Prior Art are forwarded.

10. Prior to addressing the grounds of the rejection(s), should this application ever be the subject of public review by third parties not so versed with the technology, the following additional indicia in this examiner's Office Action is an aid to refer attention to relevant and helpful elements, figures, and/or text upon which the examiner relies to support his position. Thus, the following citations in the Prior Art are neither all-inclusive nor all-exclusive in nature as the whole of the reference(s) is(are) cited and relied upon in this action.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

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(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a); or

12. Claims 1, 8, 11, 13, and 14 are rejected under 35 U.S.C. 102 (e) as being clearly anticipated by Gifford (US 6,052,718 A).

13. Per claim 1, Gifford taught *a distribution system (eg., see col. 1 (three last letters line 24 into line 25 "distributes"), col. 3 (line 20 (fourth word "distributed")) having a parent (eg., see figure 1 (61 "M1"), col. 5 (line 47 "parent")) server (eg., see col. 3 (line 11 "server"), also note lines 10-12 of col. 3 with respect to col. 5 (line 47) and col. 9 (lines 17-18)) and thus a plurality of child servers (eg., see col. 3 (line 15 "slave") is another name for child in computer network hierarchies per col. 6 (lines 39-41)), being arranged to be capable of connection (eg., see figure 1 and col. 2 (lines 60-67)) with a plurality of clients (eg., see figure 1 "31 C1") through communication circuits (eg., see figure 1 and col. 2 (lines 61 "public internetwork")), so that contents (eg., see col. 3 (line 13 (second word "contents" (i.e., "Documents" of col. 3 (line 27))), line 47 (fourth word), line 50 (third word))) held by the parent server (eg., see col. 3 (line 13 (fourth word "server"))) recalling col. 3 (line 12)) and/or the child servers are distributed (eg., see col. 3 (line 50 "is returned")) to the clients (eg., see col. 3 (lines 47-50)) ; wherein*

a) the parent server (eg., see figure 1 (61 "M1"), col. 5 (line 47 "parent")) comprises:

a-i) a[n] unit that receives position information (eg., see col. 7 (line 62 "source IP address in message 515")), of the clients (eg., see col. 7 (lines 53-57 (note "request 515 " in line 56)), Abstract (lines 5-6 "client's location"), col. 1 (line 40 "client's network location", and line 47 "nearby"), and col. 2 (lines 27-35)) and identification information (eg., see col. 3 (lines 27-28 "URL") and col. 7 (line 54 "URL")) of the contents whose distribution is requested by the clients; and,

a-ii) a[n] unit that selects the child server which holds the contents whose distribution is requested (eg., see col. 7 (line 55 (last word "request"))) and which is closest to the client (eg., see col. 8 (line 22 (fourth through seventh words "closest to the client"))) that originates the distribution request, using the received client position information and identification information of the contents (eg., see figure 4A), and that notifies the client (eg., see figure 4B and col. 8 (lines 51-52 "The new URL is sent back to the

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client")) that originates the distribution request of the position information of the selected child server (e.g., see col. 8 (lines 51-52)); and,
b) the child server comprises a unit that distributes the contents whose distribution is request in response to a request of the client originating the distribution request (e.g., see Abstract (lines 3-6), col. 3 (lines 21-57)).

14. Per claims 8 and 11, such is a computer program product version and a method version of claim 1's distribution system which do not teach or define above claim 1, thus claims 8 and 11 are also rejected for the same reasons under 35 U.S.C. 102(e) as provided for claim 1 above since the system of Gifford requires the computer program(s) stored on computer program product(s) to program the system and conduct the method called for by Gifford as indicated above.

15. Per claim 13, rephrases claim 1 and, as such, does not teach or define above the correspondingly rejected claims and is thus rejected for the reasons cited above. However, per claim 14, it was also taught by Gifford to download programs (i.e., Netscape) per col. 3 (lines 35-36) and also col. 2 (lines 27-36).

16. In summary of the above, Gifford taught a distribution system having a hierarchy of parent and child servers connected to clients who generated requests for contents from a parent server. The requests contained the client's position information (client's IP address) and identification information (URL) of the content requested by the client which information was used to select a child server closest to the client that contained the requested content. That child server's location was then sent to the client so the client request could be redirected to the child server and the contents distributed therefrom to the client.

17. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this office action:

a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligations under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of potential 35 U.S.C. 102 (f) or (g) prior art under 35 U.S.C. 103.

19. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gifford (US 6,052,718 A) in view of Yates et al. (US 6,167,438 A).

20. Per claims 1, 8, 11, 13, and 14, that which was anticipated also was obvious, thus claims 1, 8, 11, 13, and 14 are also obvious in view of Gifford per the citations into Gifford as given above.

21. Per the limitations of claim 2, and other such claims with these limitations, Gifford did not specifically further detail, in col. 3 (lines 13-20), how contents were maintained and replicated among the child server replicas; yet, when reading Gifford as a whole, it was clearly obvious to those skilled in the art that the server replicas functioned as caches in the same manner as suggested by Yates in col. 4 (lines 53-59 of Yates) by Gifford in col. 3 (lines 36-38 of Gifford). Thus, it would have been obvious to those skilled in the art to use any known master-slave scheme (called for by Gifford in col. 3 (line 15)) to dynamically maintain the network based replication among the child replica servers called for by Gifford in col. 3 (lines 13-15) as taught by Yates who taught a master-slave (i.e., parent/child in col. 14 (lines 8-10)) scheme to dynamically maintain the network based replication among the replica servers (caches) called for by Gifford. Furthermore, Yates himself suggested the combination by his reference with Gifford via the usage of terminology in Yates (eg., see Yates (Abstract (line 2 "replication"), col. 2 (lines 44-57 "locations"), col. 4 (line 53 "replicas"), col. 14 (line 33 "replicate"), col. 17 (line 61 "replica"), col. 4 (lines 52-59 (as in Gifford (col. 3 (line 36 "documents", and line 37 "database" among other such things))), and col. 14 (lines 8-15 "parent" and "child"))). In other words, and in short, Yates (filed May 1997) was directed to improving the type of system taught by Gifford's system (filed Jan 1997) per col. 2 (lines 35-43 of Yates). Like Gifford, Yates was directed to replication of documents in a parent/child distributed system structured in a hierarchy type system with clients being redirected to replica servers holding requested contents closest to the client. Thus, and in short, Yates suggested the combination of these two references because Yates was focuses on Gifford's type systems.

22. Here, in claim 2, Yates taught *the distribution system according to the type taught by Gifford (see paragraph 21 above), wherein said parent server (e.g., see figure 1 (21-1 and 26-1), figure 6 (61), and/or col. 14 (lines 36-37)) comprises an unit that ascertains the presence or absence of a distribution request (e.g., see col. 15 (line 10 ("requests")) or the frequency of distribution (e.g., see col. 14 (lines 53-55)) requests for said contents (e.g., see col. 15 (line 2 "documents")) from said clients (e.g., see figure 1 (12-1 "CLIENT")) situated in an area for which said child server is responsible (e.g., see col. 14 (line 45) to col. 16 (line 38)), and said child server comprises an unit that acquires and copies from said parent server said contents that are not held by said child server (e.g., see col. 15 (lines 8-19)), on the basis of the ascertained presence or absence of a distribution request or the frequency of distribution requests (e.g., see Abstract (last*

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seven lines)). This claim, and others like it, is directed to well known cache maintenance as indicated in Yates in that when a request is made, but the requested item is not stored (cache miss), the item is obtained/pushed and stored in the cache as well as being passed along to the client. Examiner notes the "or" conditions in the claim(s) and need only find anyone limitation (i.e., claimed "frequency" was Yates "popularity" that is the more popular a document the more hits per unit of time (freq = hit/time) the greater the frequency).

23. Per claims 3 and 4, and other such claims with these limitations, such is LRU (Least Recently Used). Since a cache is a limited storage device smaller than the main storage system, space is sparse, thus documents that have not been requested for a certain period of time are normally deleted (i.e., house cleaning, out-with-the-old-and-in-with-the-new). None the less, such was covered by Yates in col. 14 (lines 24-26) and col. 16 (line 46 "discard"). Again, the "or" recital in the claim(s) is noted by examiner.

24. Per claim 5, such has combined the dependent limitations found in claims 2-4 with claim 1, and thus does not teach or define above the correspondingly rejected claims given above and hence is rejected for the same reasons as given for those of claims 2-4. That is paragraph 1, of claim 5, is that as found in claim 1, while paragraph 2 of claim 5 is that of claim 2, while the last paragraph of claim 5 is found in the last paragraph of claim 1.

25. Per claims 6 and 7, such repeats claim 3 and thus is rejected for the same reasons as was given for claim 3.

26. Per claim 9, such is a computer program product version similar to claims 3 and 5; however, giving the child server notification to prompt copying or deletion was inherently required to force the cache into action. Thus, like claims 3 and 5, and for reasons given for other such similar claims, claim 9 is also rejected for the reasons given with respect to these claims as given above.

27. Per claim 10, such is a computer program product version similar to claims 3 and 5; thus, like claims 3 and 5, and for reasons given for other such similar claims, claim 9 is also rejected for the reasons given with respect to these claims.

28. Per claim 12, such does not teach or define above the other correspondingly rejected claims and is thus rejected for the reasons outline and given above.

29. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).


30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Harrell whose telephone number is (703) 305-

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9692. The examiner can normally be reached Monday thru Friday from 5:30 am to 2:00 pm and on weekends from 6:00 am to 12 noon Eastern Standard Time.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack B. Harvey, can be reached on (703) 308-9705. The fax phone numbers for the Group are (703) 746-7238 for After-Final, (703) 746-7239 for Official Papers, and (703) 746-7240 for Non-Official and Draft papers.

32. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.



ROBERT B. HARRELL
PRIMARY EXAMINER
GROUP 2142